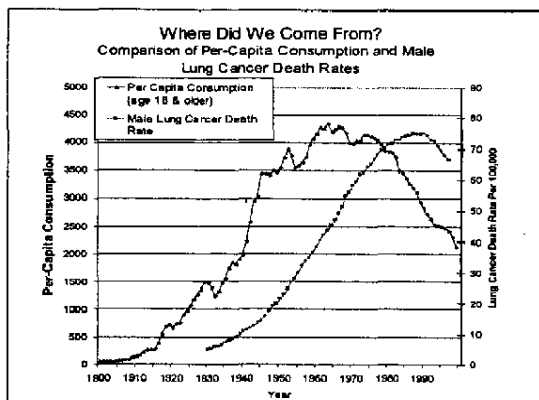


Epidemiology of Low-Yield
Cigarettes:
How did we get it so wrong?

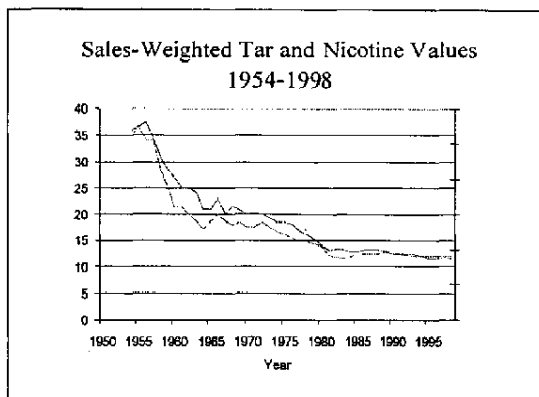
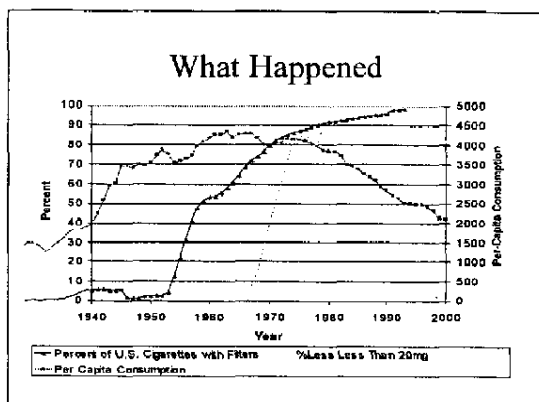
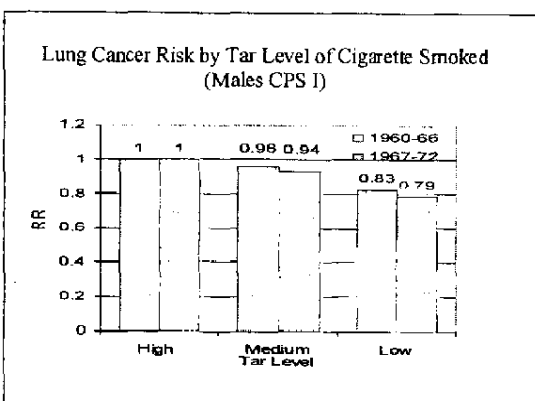
David M. Burns, M.D.
UCSD School of Medicine

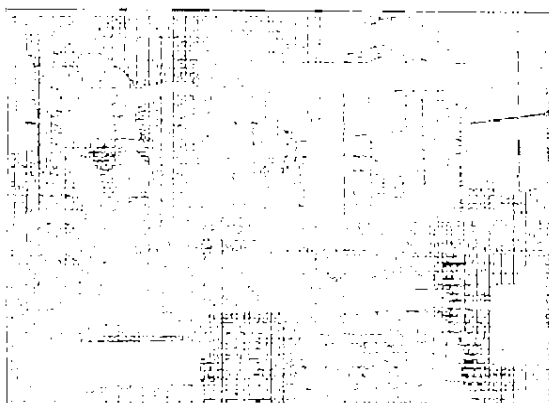
81 Surgeon General's Report
concluded that smoking
light cigarettes would
be better if you
didn't increase the
number of cigs smoked.

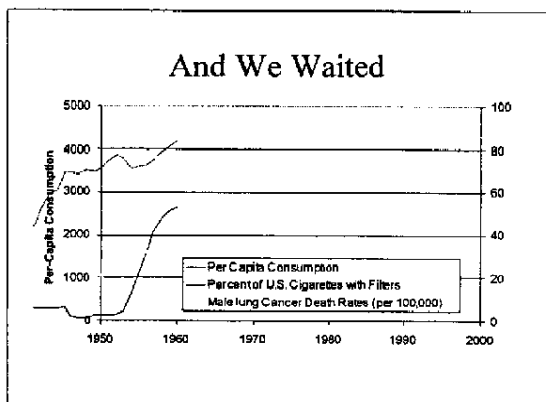


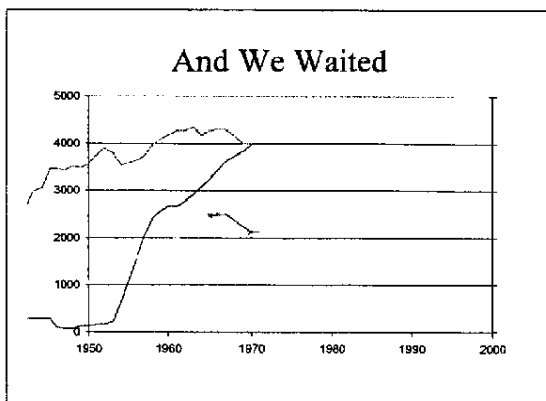
What Should Have Been

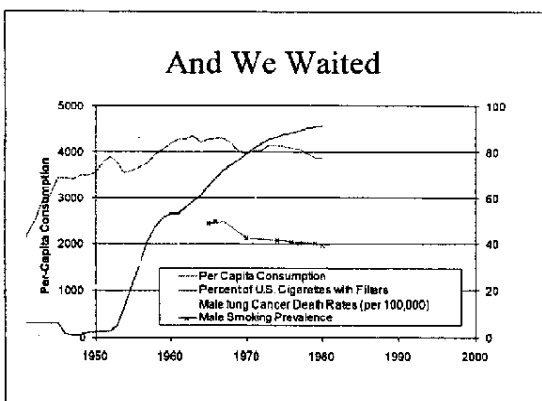
A premise of his is that
 Never smokers do not
 contract lung cancer.
 True?

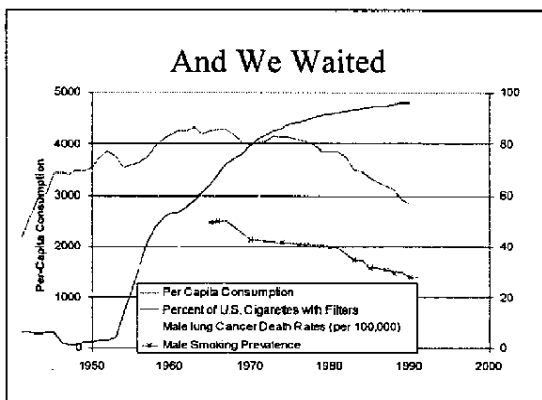


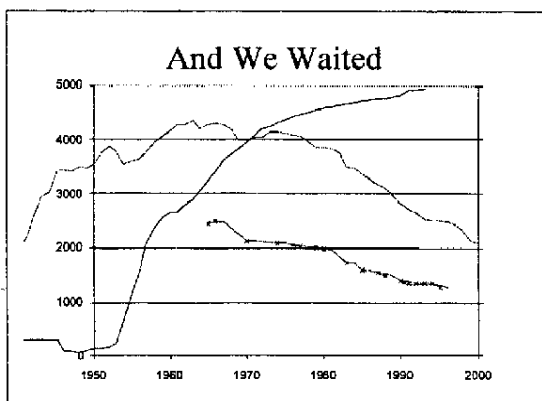




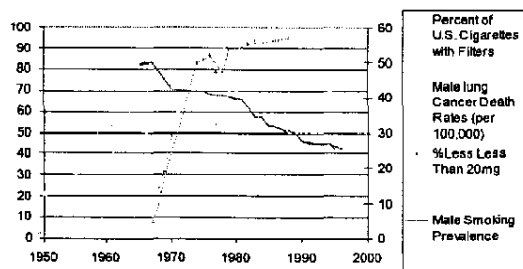




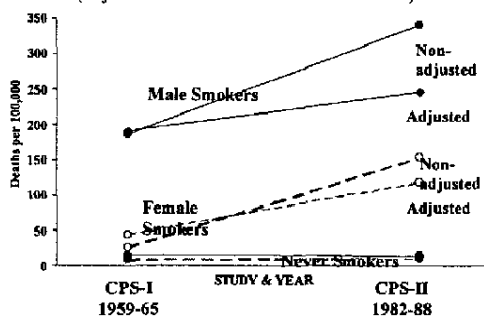




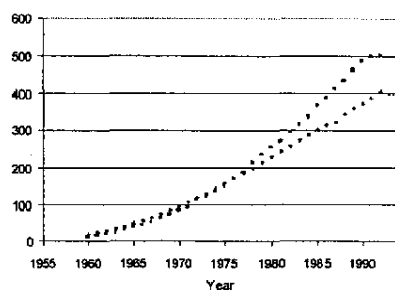
Where did The Effect Go?



Lung Cancers Death Rates by Smoking Status, CPS-I and CPS-II (adjusted for current amount and duration)



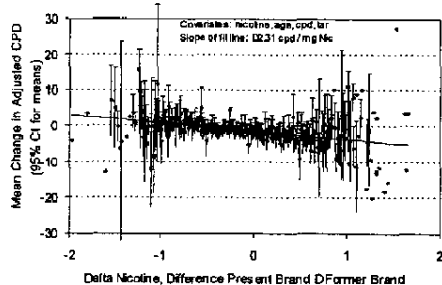
Lung Cancer Death Rates: White Males, Birth Cohort 1915-1919



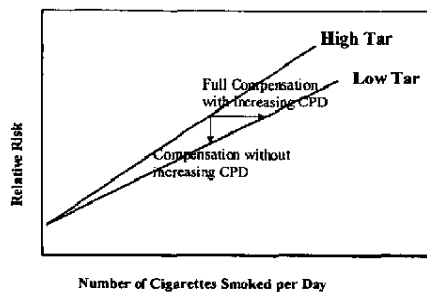
Why Didn't It Work

- We underestimated what tobacco could do with a cigarette
- We underestimated what a smoker would do to get nicotine

Change in CPD for Subjects Changing Brand Smoked
White Male Smokers ACS CPS-I Study



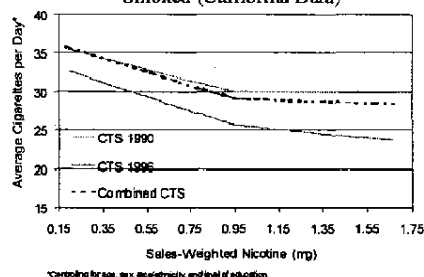
What Is the Effect of Compensation on Dose as Measured by Cigarettes per Day?



How to compare dose?
to control for dose, # is 20

Titrating to
preserve dose

Piecewise Linear Regression of Cigarettes Smoked per Day by Sales-Weighted Nicotine Yield of the Brand Smoked (California Data)



Conclusions

When all of the changes in cigarette design and manufacturing over the last several decades are examined for their combined effect, they have not contributed importantly to reducing the disease burden caused by cigarette use.

Conclusions

Measurements of tar and nicotine yields using the FTC method do not offer smokers meaningful information on the amount of tar and nicotine they will receive from a cigarette, and the measurements do not offer meaningful information on the relative amounts of tar and nicotine exposure likely to be received from smoking different brands of cigarettes.

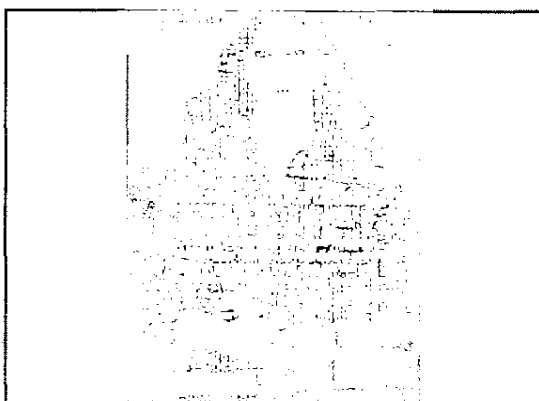
What Tobacco Was Doing

"Research staff should lay down guide lines against which alternative products can be chosen in everyday operations. Although there may, on occasions, be conflict between saleability and minimal biological activity, two types of products should be clearly distinguished, viz:

- a) Health-image (health reassurance) cigarette.
- b) A Health-oriented (minimal biological activity) cigarette, to be kept on the market for those consumers choosing it." S.J. Green 1968

What Tobacco Knew About Smokers

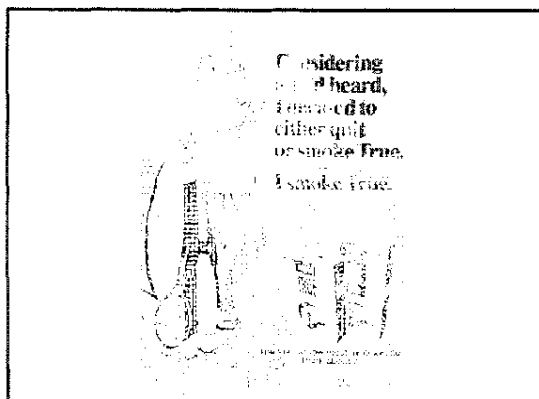
"Given a cigarette that delivers less nicotine than he desires, the smoker will subconsciously adjust his puff volume and frequency, and smoking frequency, so as to obtain and maintain his per hour and per day requirement for nicotine....." C. Teague (1972)



What Tobacco Knew About Low Tar Cigarettes

"The new filter brands vying for a piece of the growing filter market made extraordinary claims. ... In most cases however, the smoker of a filter cigarette was getting as much or more nicotine and tar as he would have gotten from a regular cigarette. He abandoned the regular cigarette, however, on the ground of reduced risk to health." (E. Pepples 1976).

Who Did They Market Them To



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This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There is no text or other markings on the paper.